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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,308	04/21/2004	Hiroko Mano	R2184.0311/P311	4787
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DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER VAUTROT, DENNIS L	
			ART UNIT	PAPER NUMBER
			2167	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/828,308

Applicant(s)

MANO, HIROKO

Examiner

Dennis L. Vautrot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 13-21, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-21, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The applicants' amendment, filed 16 January 2007, has been received, entered into the record and considered.
2. As a result of the amendment, claims 1, 8, 13, 17 and 20 are amended, claims 10 – 12 and 22 – 24 have been cancelled. Claims 1 – 9, 13 – 21, 25 and 26 are pending in the application.

### *Response to Arguments*

3. Applicant's arguments with respect to claims 1 – 26 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 3 and 13 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** (US 5,787,421) in view of **Rubinstein et al.** (hereinafter **Rubinstein**, US 5,913,215).

6. Regarding claims 1 and 13 **Nomiyama** discloses a document retrieval apparatus and a method of retrieving documents, comprising:

a query character string input unit that accepts an input of a query character string including a plurality of retrieval keywords (See column 4, lines 24 – 27 “The user input/display module 210 gives a keyword to be retrieved or other commands to the keyword retrieval engine 208...”);

a document select unit that selects one or more documents that match the query character string from a document database (See column 4, lines 55 – 60 “At step 304 the keyword or retrieval expression inputted thus is delivered to the keyword retrieval engine 208, by use of which the keyword retrieval engine 208 retrieves the keyword-to-ID index 204 and returns a set of lds for documents corresponding to the keyword or retrieval expression.”);

a retrieval result output unit that presents retrieval results of the selected documents to a user (See column 4, lines 61 – 65 “At step 306, based on a set of documents obtained at Step 304, the results of keyword retrieval (number of retrievals, title, or the like) are determined preferably on individual and separate windows in display 110 by the user input/display module 210.”); and

a document output unit that presents the contents of one of the selected documents designated by the user (See column 5, lines 43 – 46 “At Step 408, by viewing titles of the list resultant from a retrieval displayed on a separate windows as a result of Step 406, a user selects one or plural documents that seem to be interesting.”).

**Nomiyama** does not explicitly disclose wherein the document output unit determines a manner in which the retrieval keywords are highlighted in the presented one of the selected documents in accordance with a feature index indicating an extent to which each of the retrieval keywords has contributed to the selection of the documents, and highlights the retrieval keywords in the determined manner.

However **Rubinstein** discloses wherein the document output unit determines a manner in which the retrieval keywords are highlighted in the presented one of the selected documents in accordance with a feature index indicating an extent to which each of the retrieval keywords has contributed to the selection of the documents, and highlights the retrieval keywords in the determined manner. (See column 16, lines 28 – 31 “In one embodiment of the present invention, keyword phrases found in more than one web page are displayed in a different color than those found in only one web page.” And see column 16, lines 56 – 62 “...keywords found in more than one web page are displayed in a different color than those found in only one web page. It will be appreciated that other techniques may be used to distinguish unique keywords or keyword phrases without departing from the spirit and scope of the present invention.” Being “found in more than one web page” is a measure of the extent to which the keyword contributed to the selection of the documents. Also, the keyword is clearly highlighted in the determined manner, and **Rubinstein** allows for other methods of distinguishing as well.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combining the teachings of **Nomiyama** with that of **Rubinstein** because both

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references are related to optimizing keyword usage for retrieving documents, and by including the highlighting disclosure of **Rubinstein**, the keywords that are used more frequently [i.e. found more than once] are distinguished for the user, allowing them to more efficiently find relevant keywords.

It is for this reason that one of ordinary skill in the art would have been motivated to include wherein the document output unit determines a manner in which the retrieval keywords are highlighted in the presented one of the selected documents in accordance with a feature index indicating an extent to which each of the retrieval keywords has contributed to the selection of the documents, and highlights the retrieval keywords in the determined manner.

7. Regarding claims 2 and 14, **Nomiyama** additionally discloses the feature index corresponding to one of the retrieval keywords indicates the number of the selected documents including one of the retrieval keywords [number of documents containing individual keywords]. (See column 4, lines 28 – 34 “The keyword collection & sort module 212 performs a function to collect data on keywords contained in the documents retrieved by the keyword retrieval engine 208 and the number of documents containing individual keywords, to sort them in order of decreasing number of documents, to provide the data to the user input/display module 210, and to display them onto the display 110.”)

8. Regarding claims 3 and 15, **Nomiyama** teaches a document retrieval apparatus substantially as claimed. **Nomiyama** does not explicitly disclose a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed.

However, **Rubinstein** discloses a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed. (See column 16, lines 56 – 62 "...keywords found in more than one web page are displayed in a different color than those found in only one web page. It will be appreciated that other techniques may be used to distinguish unique keywords or keyword phrases from non-unique keywords or keyword phrases without departing from the spirit and scope of the present invention." Here, if the keyword is used more than once a different color is used from keywords only used once.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combining the teachings of **Nomiyama** with that of **Rubinstein** because both references are related to optimizing keyword usage for retrieving documents, and by

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including the color table disclosure of **Rubinstein**, the keywords that are used more frequently are distinguished for the user, allowing them to more efficiently find relevant keywords. It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed.

9. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** in view of **Rubinstein** as applied to claim 1 and 13 above, and further in view of **Bates et al.** (hereinafter **Bates**, US 2002/0174118). **Nomiyama** and **Rubinstein** teach a document retrieval apparatus substantially as claimed. **Nomiyama** and **Rubinstein** do not explicitly disclose a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding to each feature index of the retrieval keyword with reference to the feature index/gray scale table, and displays the retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed.

However **Bates** discloses a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding



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to each feature index of the retrieval keyword with reference to the feature index/gray scale table, and displays the retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed. (See page 2, paragraph [0015] "For example, if a web page contained the keyword "cricket" eight times and the keyword "bat" two times, eighty percent of the visual area of the correlation indicator could be blue and twenty percent green." These represent a scaled amount of their color that represents the proportion the document was used in selecting the document. The fact that the color in the example used is blue or green does not change the fact that it could have been grey. The basic idea of a scaled version of color is shown.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** and **Rubinstein** with that of **Bates** because both are related to optimizing keyword usage for retrieving documents, and by including the scale of color representing the amount of times the keyword is found in the document as in the disclosure of **Bates**, the keywords that are used more frequently are distinguished for the user, allowing them to more efficiently find relevant documents. It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding to each feature index of the retrieval keyword with reference to the feature index/gray scale table, and displays the

retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed.

10. Claims 5, 6, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** in view of **Rubinstein** as applied to claims 1 and 13 above, and further in view of **Sumita et al.** (hereinafter **Sumita**, US 5,907,836).

11. Regarding claims 5 and 17, **Nomiyama** and **Rubinstein** disclose a document retrieval apparatus substantially as claimed. **Nomiyama** and **Rubinstein** do not explicitly disclose a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed.

However, **Sumita** discloses a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed. (See column 31, lines 42 – 46 “The emphasis-expression is display to be usually performed such that a portion of text is

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emphasized as compared with other portions by using an additional symbol, such as an underline, a different font, a character having different size or different color.”)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** and **Rubinstein** with that of **Sumita** because both are related to enhancing the retrieval of documents, and by including the type face differentiation as in the disclosure of **Sumita**, the keywords that are used more frequently are distinguished for the user, allowing them to more efficiently find relevant documents. This motivation is also included in **Sumita** on column 31, lines 65 – 67 “The foregoing fact improves the efficiency in performing an operation for determining the usefulness of the article presented for relevance feedback for example.” It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed.

12. Regarding claims 6 and 18, the combination of **Nomiyama**, **Rubinstein** and **Sumita** additionally discloses the type face includes at least one of font, size, and style of a character. (See **Sumita** column 31, lines 42 – 46 “The emphasis-expression is display to be usually performed such that a portion of text is emphasized as compared

with other portions by using an additional symbol, such as an underline, a different font, a character having different size or different color.”)

13. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** in view of **Rubinstein** as applied to claims 1 and 13 above, and further in view of **Morita** (US 5,168,565). **Nomiyama** and **Rubinstein** disclose a document retrieval apparatus substantially as claimed. **Nomiyama** and **Rubinstein** do not explicitly disclose a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents.

However, **Morita** discloses a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents. (See column 9, lines 26 – 35 “The sorter 53 sorts the group of the related keywords which are obtained from the keyword relationship/relevance calculator 52 in a sequence starting from the related keywords having the largest relationship value to the related keyword having the smallest relationship value. The

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sorted group of the related keywords is supplied to the table controller. The table controller supplies the group of the related keywords to the display device 708 for monitoring by the user.” This is another way of saying the keywords are ranked and displayed.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** and **Rubinstein** with that of **Morita** because both are related to optimizing keyword usage for document retrieval; and by including the ranking by relevance teaching of **Morita**, the user is able to use the apparatus more efficiently because the most relevant keywords to the document are displayed earlier in the list. It is for this reason that one of ordinary skill in the art would have been motivated to include a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents.

14. Claims 8, 9, 20, 21, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** in view of “**EAST 1.1 Enhancements – Search and Information Resources Administration Automation Training**”, July 2000, <http://ptoweb/patents/training>” (hereinafter **EAST**).

15. Regarding claims 8 and 20, **Nomiyama** discloses a document retrieval apparatus and a method of retrieving documents, comprising:

a query character string input unit that accepts an input of a query character string including a plurality of retrieval keywords (See column 4, lines 24 – 27 “The user input/display module 210 gives a keyword to be retrieved or other commands to the keyword retrieval engine 208...”);

a document select unit that selects one or more documents that match the query character string from a document database (See column 4, lines 55 – 60 “At step 304 the keyword or retrieval expression inputted thus is delivered to the keyword retrieval engine 208, by use of which the keyword retrieval engine 208 retrieves the keyword-to-ID index 204 and returns a set of Ids for documents corresponding to the keyword or retrieval expression.”);

a retrieval result output unit that presents retrieval results of the selected documents to a user (See column 4, lines 61 – 65 “At step 306, based on a set of documents obtained at Step 304, the results of keyword retrieval (number of retrievals, title, or the like) are determined preferably on individual and separate windows in display 110 by the user input/display module 210.”); and

a document output unit that presents the contents of one of the selected documents designated by the user (See column 5, lines 43 – 46 “At Step 408, by viewing titles of the list resultant from a retrieval displayed on a separate windows as a result of Step 406, a user selects one or plural documents that seem to be interesting.”);

**Nomiyama** does not explicitly disclose wherein the query character string input unit allows a user to designate a word other than the retrieval keywords, the word can be highlighted by the document output unit in the presented one of the selected documents.

However **East** discloses wherein the query character string input unit allows a user to designate a word other than the retrieval keywords, the word can be highlighted by the document output unit in the presented one of the selected documents. (See pages 105 – 109, which disclose using part of the string input unit to search for, and highlight, words other than those used for retrieval of the documents.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Nomiyama** with that of **EAST** because both are related to using keywords to retrieve relevant documents, and by including the highlighting of certain non-keywords as disclosed in **EAST**, the user can most efficiently search by tailoring the document search to certain words, while still allowing others to be used. It is for this reason that one of ordinary skill in the art would have been motivated to include wherein the query character string input unit allows a user to designate a word other than the retrieval keywords, the word can be highlighted by the document output unit in the presented one of the selected documents.

16. Regarding claims 9 and 21, **Nomiyama** discloses a document retrieval apparatus substantially as claimed.

**Nomiyama** does not explicitly disclose the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents.

However, **EAST** discloses the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents. (See page 37 where terms that are necessary for the search, but do not need to be highlighted can be deselected.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Nomiyama** with that of **EAST** because both are related to using keywords to retrieve relevant documents, and by including the non-highlighting of certain keywords as disclosed in **EAST**, the user can most efficiently search by only viewing words that are likely to be most relevant to the search, while excluding highly used keywords that are necessary for the search, but not for determining the most relevant document. It is for this reason that one of ordinary skill in the art would have been motivated to include the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents.

17. Regarding claim 25, **Nomiyama** discloses a computer program [retrieval engine] that causes a computer to operate as the document retrieval apparatus as claimed in claim 1. (See column 3, lines 44 – 46 "...a hard disk 108 in which an operating system



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for controlling the CPU 102, a database file, a retrieval engine, index file, and the like are stored.”)

18. Regarding claim 26, **Nomiyama** discloses a computer readable recording medium [hard disk] storing the computer program as claimed in claim 25. (See column 3, lines 44 – 46 “...a hard disk 108 in which an operating system for controlling the CPU 102, a database file, a retrieval engine, index file, and the like are stored.”)

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

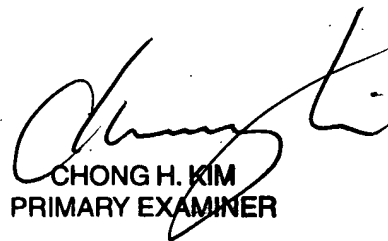
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis L. Vautrot whose telephone number is 571-272-2184. The examiner can normally be reached on Monday-Friday 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dv  
26 March 2007

  
CHONG H. KIM  
PRIMARY EXAMINER